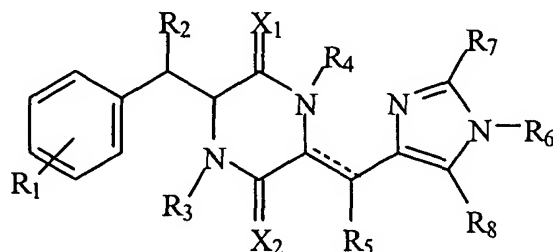


PHENYLAHISTIN AND THE PHENYLAHISTIN ANALOGS, A NEW CLASS OF ANTI-TUMOR COMPOUNDS

Abstract of the Disclosure

Methods of using a compound, its pharmaceutically acceptable salts, and/or its pro-drug esters, in isolated form, to treat cancer, and methods for isolating, for formulating, and for administering the compound, salt, and/or pro-drug ester as an antitumor agent, wherein the compound, salt, or pro-drug ester has the following structure:



wherein:

R₁, R₂, R₅, R₇, and R₈ are each separately selected from the group consisting of a hydrogen atom, a halogen atom, and saturated C₁-C₂₄ alkyl, unsaturated C₁-C₂₄ alkenyl, cycloalkyl, cycloalkenyl, alkoxy, cycloalkoxy, aryl, substituted aryl, heteroaryl, substituted heteroaryl, amino, substituted amino, nitro, substituted nitro, phenyl, and substituted phenyl groups,

R₃, R₄, and R₆ are each separately selected from the group consisting of a hydrogen atom, a halogen atom, and saturated C₁-C₁₂ alkyl, unsaturated C₁-C₁₂ alkenyl, cycloalkyl, alkoxy, cycloalkoxy, aryl, substituted aryl, heteroaryl, substituted heteroaryl, amino, substituted amino, nitro, and substituted nitro groups,

X₁ and X₂ are separately selected from the group consisting of an oxygen atom, and a sulfur atom, and

the dashed bond represents a bond selected from the group consisting of a carbon-carbon single bond and a carbon-carbon double bond. Most preferably, R₃ and R₄ are hydrogen, and each are involved in hydrogen bonds, and/or the dashed bond is a double bond, such that the chemical backbone of the compound substantially retains a substantially planar conformation.